circles I never enter, to such company I dare not approach; village scenes alone have occupied my contemplations. But even in villages we have abstracts of high life, and the manners of the great are there represented in miniature. If, therefore, in my delineations of character, something approaching to fashionable refinement may be met with, let it be remembered, that the principle of imitation operates perhaps more universally, and more powerfully, than any other, that its influence is felt, even by those in the lowest spheres of life, and that, of course, the conduct and manners of the court, will, by a regular gradation, descend to, and be awkwardly displayed by the inhabitants of the cottage. The female mind, particularly, from its melting softness and tender susceptibility, is more easily captivated with the native charms of virtue, or more apt to be led astray by the gaudy trappings of folly, and while its *graces* shall be portrayed with due faithfulness, its *errors* shall also be exposed, and thus rendered a warning to others. But not only to "catch the living manners as they rise," has been my study, I have *inspected* not only *men*, but *things*, and can develope an infinite variety of scenes, situations, and circumstances, which may afford instruction, or produce entertainment.

Such then are my pretensions to publicity, and if the Proprietors of the Belfast Magazine indulge me with a page occasionally there, no longer shall the result of my observations be concealed from the world. Borne on *their* wings, I shall visit the closets of the fair, be caressed by the gay, and admired by the grave. If room is granted me in their useful publication, my readers, of every description, will find something to excite their mirth, or on which they may vent their spleen; but *personal* satire shall never mingle its gall with my remarks; no particular person shall curse the moment in which the "Inspector" seized the pen; none will be able to say, "Behold the victim of his malice!" "Folly as it flies" is his game; against it his arrow is pointed, and he wishes for the approbation of those alone, who desire its fall.

J.A.J.

BIOGRAPHICAL SKETCHES OF DISTINGUISHED PERSONS.

HISTORICAL EULOGY ON THE LATE HON. HENRY CAVENDISH, READ AT A PUBLIC MEETING OF THE IMPERIAL INSTITUTE, ON THE 6TH OF JANUARY, 1812, BY THE CHEVALIER CUVIER.*

OF the eminent men whose talents we are accustomed to celebrate in this assembly, there have been too many who have had reason to learn how to withstand the obstacles opposed to them by misfor-

* It is honourable to the French character: it is honourable to the Republic of Letters, to behold, in the midst of a war, in which so many circumstances conspire to embitter the minds of the hostile nations, that men of letters keep free from that nationality, which obscures the merits of the inhabitants of another country. It is also singular that the eulogium of an English votary of science should be first acknowledged in the French Institute, even before his compatriots had paid the debt of justice to his memory.

tune. But he of whom we are about to speak had the still scarcer, and probably the much greater merit of not suffering himself to be overcome by vast wealth! Neither his birth, which laid open before him the road to honours, nor great riches, which offered him the attainment of every pleasure, could withdraw him from his fixed object. He was regardless even of glory, or worldly distinctions, and his only predilection was a disinterested love of truth. But, if he deprived himself of what ordinary men most highly prize, he was rewarded by a magnificence proportioned to the purity of the sacrifice. All that the sciences have revealed to him seems to contain something of the sublime and wonderful. He weighed the earth; he prepared the means of sailing in the air; he deprived water of its elementary quality, by decomposing it; and the truth of these doctrines, so new and so opposite to received opinions, he proved by evidences still more astonishing than their discovery. The writings in which he explains them, are so many *chef d'œuvres* of science and method: they are perfect either as a whole or in their details: for no other hand has been able to correct them, while time has continually increased their reputation. In short, there is nothing of rashness in the prediction that his memory will reflect as much lustre on his family as he himself received from it, and that those studies which, perhaps, excited the pity or contempt of some of his relatives, will transmit his name to a period at which his rank, or that of his forefathers, will be scarcely recollected. The history, indeed, of thirty centuries, clearly teaches us, that great and useful truths are the only permanent inheritances which man can leave behind him.

Certainly a genius of this class is not in need of eulogy: but it is necessary to hold up such men as examples to the world; and this will be our object in sketching the life, or, rather, in presenting an abridgment of the labours of Henry Cavendish, Esq. Member of the Royal Society of London, and Foreign Associate of the Imperial Institute of France.

We say an abridgment of his *works*, because he has, in fact, been sufficiently wise or fortunate to render society regardless of any thing else that concerns him; and, therefore, his history contains no incidents except his discoveries, which are worthy of recording. Let no one then expect to hear, as a part of this great man's history, that sort of detail which originates in singular or various adventures. To know at once how to enlighten his cotemporaries, and to be esteemed by them; to possess talents, and yet be respected by criticism; to be rich, and possess family honours without exciting envy; to preserve his health and mental powers after long-continued and indefatigable labours, are a combination of advantages which so seldom occur in the life of man, that we cannot but feel interested in knowing the particulars of these advantages, and in studying the causes which produced them.

Mr. Cavendish was born in London, on the 10th of October, 1731. His father was Lord Charles Cavendish, likewise a Member of the Royal Society, and Trustee of the British Museum.

His family, which traces its descent from one of the companions of William the Conqueror, is amongst the most illustrious houses of Great Britain. It has, for more than two centuries, belonged to the peerage, and William III. in 1694, exalted its head to the title of Duke of Devonshire.

It has been observed that in Eng-

land there are more people of quality who seriously apply themselves to the sciences, or to letters, than in other countries. The fact is, that from the nature of the government, neither birth nor fortune can confer distinction upon the possessors, unless these are accompanied by talents. Hence, it is necessary to prepare the young nobility for acquiring general knowledge, by a proper course of studies; and, amongst so many young men who have the advantages of a scientific education, some are always found who rather choose to employ their faculties in searching for imperishable facts, than in merely supporting the vacillating interests of the hour.

The whole life of Mr. Cavendish is a proof that such a preference was implanted in his very nature: but domestic example was necessary to confirm, at an early period, this inclination.

Lord Charles, his father, was also a lover of the sciences, and has left some good observations on natural philosophy. It is probable that he directed the early studies of his son; but we have no account of the method he adopted in his elementary education, nor even of the first attempts of the young Henry in the road of science. He appeared in it suddenly, but nevertheless in such a manner as to indicate that he had been well instructed. At his very commencement in philosophy, he struck into a line before then unknown, and gave the signal for the arrival of an entirely new epoch.

We allude to the Dissertation on Air, which he laid before the Royal Society, in 1766:* an article, the object of which was nothing less than to establish the fact, till then never heard of; namely, that *air is not an element; but that there are several kinds of air essentially different.*

From the time of Van Helmont, philosophers knew that various bodies exhale fluids, which resemble air by their permanent elasticity. Boyle soon found out that they cannot serve for respiration; Hales thought they might be measured; and conceived the means of effecting this point. Brownrigg and Venel had shown that certain mineral waters derive from them their pungent taste: Black had discovered, that, by their presence, quick lime is distinguished from lime-stone, as well as are the caustic from the common alkalis. Macbride at length called the attention of physicians towards them, by employing them against putrefaction: but, amidst all these investigations, a sufficient distinction had not been made between the different sorts of airs: it was not generally believed that they were particular substances in their species; and more than one philosopher of renown persisted that they were only common air, altered by the emanations of the bodies which furnished it; though nobody could precisely point out of what these supposed emanations consisted.

Mr. Cavendish, however, gave in his paper; and, in a few pages, he threw such light on the subject, that there was no longer but one opinion.

He compared, for example, the elastic fluid extracted from lime and the alkalis, with that produced by fermentation and putrefaction, as well as with that which prevails at the bottom of wells, mines, and pits; and he showed that they all possess the same properties, and form only one and the same fluid, for which was afterwards reserved the name of *fixed air.* He ascertained the specific gravity of this air, and found it to be always the same, or greater by one-third than that of common

* Phil. Trans. 1766. p. 141.

air; this fact explained why fixed air always fills low places, as well as the deleterious effects which it occasions. He discovered that this sort of air has the property of combining with water, and then dissolving limestone and iron; which illustrates the effects of petrifying waters, of stalactites, and of the presence of iron in mineral waters. In short, he convinced himself that it is precisely this same air which is given out on the combustion of charcoal, and which renders this kind of combustion so dangerous.

His experiments on inflammable air were still more novel and interesting. Before the period in question, scarcely any one had given attention to the nature of this fluid, which was known only from the explosions which it sometimes caused in the mines. Mr. Cavendish, however, by treating it like fixed air, proved that inflammable air is identical, and possesses the same properties, whether it be obtained from the solution of iron, or from that of zinc or copper: and amongst these properties, he particularly proved it to possess that specific gravity, or rather rarity, which renders it nearly ten times lighter than common air; and of which peculiar quality our brother member, M. Charles, has since made such a notable application, by rendering aërial travellers safe and easy! In short, we may say, that, without the discovery of Mr. Cavendish, and the application of it by M. Charles, the attempt of M. de Montgolfier would scarcely have been practicable, so numerous are the dangers and embarrassments of the aëronaut, if he be obliged to keep the common air dilated by means of fire, as must be the case with all the Montgolfier balloons.

The labours of Mr. Cavendish respecting airs had, however, far greater consequences, the importance of which was speedily discovered. The fact, once ascertained, that there might exist several elastic fluids, invariable in their properties, and specifically different in their nature, led to the first investigations of Priestley, which made known two new kinds of fluids, phlogistic and nitrous air. Soon after this discovery, men began to find out in what way the different airs influenced the phenomena of nature, and to infer, that systems of philosophy and chemistry, established without due regard to such powerful and universal agents, could not be permanent. The minds of philosophers, agitated by impatience and doubts, which formed their principal resource, were in a sort of fermentation, and each person endeavoured to give reasons for supporting those theories which were evidently going to ruin. The introduction of fixed air amongst the acids, by Bergmann, though it simplified chemistry in a small degree, appeared but a slight palliative to the radical vice which was now admitted.

The science had remained in this state for the space of seven years, when Lavoisier received the first light of his famous doctrine. Having obtained a quantity of fixed air, from the reduction of metals by carbon, he concluded, that the calcination of metallic substances was nothing more than their combination with fixed air. A year afterwards, Bayer reduced calces of mercury without carbon, in luted vessels, and thus sapped the principal foundation of the phlogistic theory. Lavoisier next examined the air produced by these experiments without carbon, and found it respirable; and nearly about the same time, Priestley discovered, that this was precisely the part of the atmosphere necessary at once for respiration and combustion.

Lavoisier now made his next step,

He asserted, that respiration, the calcination of metals, and combustion, are similar operations, caused by the combinations of respirable air; that fixed air is the peculiar product of the combustion of charcoal; but the phenomena of solutions, and the inflammable air which appears on those occasions, were not yet explained. It required six more years to ascertain these points, and Mr. Cavendish had the honour of the discovery.

Scheele had observed, that on burning inflammable air, he obtained neither fixed air nor phlogisticated air; the whole seemed to disappear. Macquer, endeavouring to retain the vapour from this combustion, observed, with astonishment, some moisture on the vessels he made use of: but he thought with Scheele, that the airs were lost. Mr. Cavendish, who had in some degree introduced inflammable air into chemical experiments, was the first to point out the great part which it would act in the science.* Acting, as he did, on his first discovery, with precision, on a subject vaguely understood before his time, he deflagrated inflammable air in closed vessels, by the electric spark, by supplying gradually as much respirable air as was necessary for the combustion: he then found, that the former of these airs absorbed a certain portion of the latter, and that the whole resolved into a quantity of water, equal to the weight of the two airs that had disappeared.

This great phenomenon, which Mr. Cavendish spent three years in confirming, was announced to the Royal Society, on the 14th of January, 1784. Our brother member, the Count de Peluse, who had conceived the same idea, and made the same experiments as Mr. Cavendish, communicated the result about the same time to Lavoisier and M. de Laplace. If the combination of the airs give out water, said M. de Laplace, this must be the result of its decomposition. Philosophers then employed themselves in decomposing water, in the same manner as they had composed it. Lavoisier performed the two operations, with great solemnity, before a committee of the Academy; and those experiments, having formed the basis of his new theory, threw much light on what had till then escaped notice.

In fact, water being nothing but a combination of the two airs, wherever it is found, it will always furnish them by decomposition; and, whereever the airs exist, water can be produced from their combination. Hence, as inflammable air is obtained by metallic solutions, and by a series of other results, the composition of organised beings, and the most complicated changes of their principles are effected. In short, from this period, the theory of chemistry was placed upon immutable bases.

Thus, it may be said, that this new theory, which has effected so great a revolution in the sciences, is indebted for its origin to a discovery by Mr. Cavendish; and that a second discovery, by the same philosopher, rendered it complete.

This gentleman, however, made a third discovery, which would have been sufficient to immortalise him, if the two others had not occurred: it was that of the composition of the nitrous acid, a substance so useful in the arts, and so abundant in nature; a substance about which, before the time of Mr. Cavendish, chemists entertained only vague and hypothetical ideas.*

From his first experiments on the combustion of inflammable air, it oc-

* Philos. Trans. 1784; Part I. p. 119.

* Phil. Trans. 1786.

curred to him that there was a formation of nitrous acid, and that it would accrue in proportion to the quantity of the air employed, which was then called phlogiston, but which has since been termed azote.

On examining afterwards the product from the detonation of nitre by charcoal, he found it to consist of this same phlogisticated air and fixed air. It was the carbon which had given out the latter. Consequently the former could only have been furnished by the acid of the nitre.

Mr. Cavendish was soon enabled to prove, by direct experiments, the accuracy of his conjecture. On firing, by the electric spark, a mixture of atmospheric and phlogisticated airs, he converted it into nitrous air; which, of itself, changes into an acid by a new addition of atmospheric air.

Thus the elements of the nitrous acid were discovered to be the same as those of the atmosphere, only in different proportions; and from that time we had clear ideas of the universal, and till then incomprehensible generation of that acid.

One cannot peruse without a sort of enthusiasm, the history of this epoch, the most brilliant which ever occurred to chemistry. Discoveries seemed to press upon one another. Mr. Cavendish having communicated the experiment he had just made on the nitric acid to our colleague Berthollet, he received from him, in return, post after post, accounts of the decomposition of ammonia, in inflammable, as well as in phlogisticated air. For what men, and what an age, was such a correspondence reserved!

At length, Mr. Cavendish examined the atmosphere itself; and it produced on living beings such various effects, that it was naturally supposed to be very variable in the proportion of its elements.

Priestley, who had discovered the pure and respirable air, had also discovered the means of ascertaining the quantity of such air in (or the respirability of) any air whatever. It was only necessary to measure the portion of pure air which was absorbed on mixing it with nitrous air; but his instruments were not at that time perfect; notwithstanding the improvements made in them by Fontana.

Mr. Cavendish, by a slight difference in the process of making them, gave them a much greater precision;* and, having employed them in comparing pure air in different places, and at various times, he ascertained a result which was little expected; namely, that the quantity of respirable air is every where the same; and that the smells which so sensibly affect our organs, and the miasmata which so dreadfully assail our system, cannot be destroyed by any chemical means; a fact, which, though on the first view it is very discouraging, nevertheless affords to the reflecting mind an immense scope, and exposes, at a vast distance, the shadows of sciences which exist not yet for us, but for which alone it is perhaps reserved to explain to us the hidden secrets of those which already prevail.

M. de Humboldt has confirmed this fact in the most distant regions, by means of the eudiometer of inflammable air; and M. Gay Lussac, on ascending in a balloon, found it equally true at the greatest heights which man could reach, as it was in the inferior strata of the atmosphere. Thus these courageous philosophers always made use of an agent found out by Mr. Cavendish, to verify another of his discoveries.

Such are the circumstances which have justly given Mr. Cavendish a place amongst chemists. They occupy, in description, but a very few

* Philos. Trans. 1785, Part I. p. 106.

pages of print; but they will outlive many a large volume: the labour, however, which they once cost, must not be estimated by the space which they now fill.

To untie the concealed knot which unites so many complicated phenomena; to pursue the same principles, amidst so many alterations and metamorphoses, and particularly to expose so clearly what had for so many centuries escaped the most able of men, and to make these facts evident to all the world, could only be the effect of the most persevering and well-directed cogitations. Mr. Cavendish, indeed, was a living proof of the truth of the adage of one of his most illustrious cotemporaries—that genius is only an additional incitement to patience; which is strictly true, when we allude to the patience of a man of intellect.

Another qualification equally laudable, was this gentleman's rigid system of experiments. No sophistry, nothing of a doubtful nature, was suffered to pass unelucidated. His perseverance was so well known, that his cotemporaries took pleasure in submitting to him the results of their inquiries; being almost certain, that, if he approved of them, nobody else could amend them. He was, however, more severe with himself, in matters of science, than he was towards any other person; and it was this rigid plan which gave to his labours such a degree of perfection, that, even at the present day, nothing can be added to, or abstracted from them; although his first reports were published more than forty years ago, and the science to which they relate has undergone, in the interval, a complete revolution; an advantage which perhaps no other man has possessed since writings on the sciences first became general.

This rigorous spirit of investigation, introduced into chemistry through the influence of Mr. Cavendish, has rendered as eminent services to this science as his discoveries themselves; for it is to his system that we are indebted, in a great degree, for those discoveries which he did not make.

About the middle of the eighteenth century, chemistry seemed to be the only asylum for the systems and suppositions which Newton had driven from philosophy. Cavendish and Bergmann expelled them from this last resort, and cleansed this Augean stable from the filth of the Hermetic philosophy. After them, nobody dared to operate otherwise than with determined quantities, and by keeping an exact account of all kinds of products! It is this mode of proceeding which forms the distinguishing characteristic of modern chemistry, much more so than its theories, which, however fine they may appear to us, would not perhaps be invulnerable, if we were at some future time to succeed in obtaining substances which at present are unknown to us.

The persevering or rigid spirit of Mr. Cavendish was owing to a profound study of geometry, of which he likewise made direct applications, and sometimes with as much success as his researches in chemistry.

Such, in particular, is his determination of the mean density, or, what is the same thing, of the total weight of the globe*; an idea which has at first something in it that is terrific, but which is nevertheless reduced to a simple mechanical problem. Archimedes only wanted a point of support to enable him to move the earth, but this was not necessary to enable Mr. Cavendish to weigh it!

Mr. Mitchell, another member of the Royal Society, who died some time ago, had conceived the means of performing this experiment, and

* Philosophical Transactions, 1798, Part II. p. 469.

had constructed an apparatus, which was nearly the same as our late colleague, M. Coulomb, had already employed, for measuring the power of electricity, and that of the loadstone.

A lever six feet long, and having at its extremities a little leaden ball, was suspended horizontally by the middle to a vertical thread. When the lever had obtained an equilibrium, and become stationary, there was brought towards each of its ends a great mass of lead, of a given weight and diameter: the attraction of the masses on the balls put the lever in motion, the thread then twisted, in order to yield to this action, and stretching, to return to its former state, it made the lever describe little horizontal arcs, as the ordinary weight: that is to say, the attraction of the earth causes vertical arcs to be described by the pendulum; and, on comparing the extent and duration of these oscillations with those of the pendulum, we obtain the produce of their causes, that is, of the attractive power of the masses of lead, and of that of the whole terrestial globe. But we can only give a rough sketch of the apparatus, and of the cautions and calculations which the experiment required. The moveable power of the lever was such, that the least difference of heat between the two balls, or only between the different parts of the air, occasioned a current that was sufficient to make it vibrate. It was even necessary to find the degree of attraction of the sides of the wooden box in which it was contained, and the care in measuring the extent of the vibrations, and even to observe them without altering them by approaching too near, was inconceivable. All these difficulties did not occur, till the performance of the experiments, and the delicate means which were used to overcome them, the necessity of which had not been foreseen, even by Mr Mitchell, belong entirely to Mr. Cavendish. The result was singular. The mean density of the globe must be almost five times and a half greater than that of water. From this discovery, it results, that not only the globe has no vacuum, but that the substances in its interior must be heavier than those on its surface; for the stones of which common rocks consist, are not more than about three, or seldom four, times heavier than water; and no known stone is five times as heavy. We may, therefore, believe, that metals abound most towards the centre of the globe. Thus has this simple experiment given entirely new ideas respecting the theory of the earth.

At first this discovery appeared to contradict that of Maskelyne, in which the deviation produced by the vicinity of a mountain, on the plumb line of his instruments, had made him conclude, that the mean density of the globe was only four times and a half greater than that of water. But it is asserted, that these experiments having been since made with more accuracy, their result comes much nearer to that of Mr. Cavendish.

This gentleman was also one of the first who applied calculation to the theory of electricity. He performed this task before the appearance of the work of Æpinus, but the account of it was not printed till afterwards. It is founded on the same hypothesis; that is to say, on one single electric substance, the particles of which mutually repelled each other, and would be attracted by other bodies. But Mr. Cavendish went further than Æpinus, by supposing, that if this action is exerted in a less degree than the inverse of the cube from the distance, we may prove, by means of the theorem of Newton, on the attraction of a sphere, that all the electric matter of

a body of this form must be on its surface.*

It is known, that our colleague, the late M. Coulomb, has since shown, by direct experiments, that the action of electricity is exerted in the inverse ratio of the square of the distance; and he has proved, in a much more general manner, the necessity of this distribution on the surface of bodies, whatever may be their figure.

When Walsh announced the analogy between the shock given by the torpedo, and that of the Leyden phial, it was objected that this first did not produce sparks. Mr. Cavendish, however, set about explaining the difference.† He constructed, on the principles of his explanation, a kind of artificial torpedo, which presented the same phenomena on being electrified. The real cause of animal electricity, nevertheless, did not occur to him; and it remained for Volta to discover an apparatus for continually producing this wonderful fluid, and incessantly to electrify of its own accord; an apparatus, very probably, similar, in its essential points, to those with which nature has supplied electric fish.

It is also known, that the same Mr. Walsh observed sparks emitted from the electric eel of South America; a fish which possesses this property in a much greater degree than the torpedos of Europe, and which, according to M. de Humboldt, is capable of stunning a horse by its shocks.

We are likewise indebted to Mr. Cavendish for some observations on the height of luminous meteors,‡ which led to suspicions that have since been so amply verified, respecting the fall of stones from the atmosphere. He wrote a very learned article, on the means of bringing to perfection meteorological instruments,† and some ingenious remarks on the effects of frigorific mixtures.‡ He even devoted his attention to the Calendar of the Hindoos, and endeavoured to compare the confused cycles of those people with our manner of counting time. But the limits of a public discourse will not permit us to analyse his writings: we can only mention them, to introduce Mr. Cavendish as an additional proof, that great discoveries are reserved only for men who constantly apply themselves to study.

Towards the close of his life, he employed himself in giving more accuracy to the division of great astronomical instruments; and it was certainly carrying the love of accuracy to the extreme, to be dissatisfied with that art which, of all others, had been brought to the greatest perfection.

From this long enumeration of the labours of Mr. Cavendish, it may be readily believed, that so active a life could not be one of much agitation. But it cannot be imagined to what a degree his life was uniform, and with what rigour he fulfilled the vow he had made, to devote himself to study. The most austere anchorites were not more faithful to theirs. Amongst the numerous problems which he resolved, he placed in the first rank, that which directs us not to lose a minute nor a word; and he, in fact, gave so complete a solution of it, that he astonished men who were the most economical in their

* Philosophical Transactions, 1771, p. 584.

† Philosophical Transactions, 1776, p. 196.

‡ Philosophical Transactions, 1790, p. 101.

† Philosophical Transactions, 1776, p. 375.

‡ Philosophical Transactions, 1783, p. 303, 1786, p. 241, and 1792, p. 383.

time and words. His domestics understood, by his signs, of what he was in want; and as he gave them scarcely any trouble, this kind of dialogue was very brief. He had but one coat at a time, which he laid aside at fixed periods; and these coats were always of the same sort of cloth, and of the same colour. Indeed, people go so far as to assert, that, when he intended to ride, he always found his boots in one place, his whip being also placed in one of them, but always in the same boot! An opportunity of assisting in some new experiments, or of conversing with somebody who could give him information, or receive it from him, were the only circumstances that could interrupt his established order, or put him out of his way. On these occasions, however, Mr. Cavendish gave into the pleasures of conversation, and his dialogue, which was completely Socratical, did not end till the subject under discussion was fully elucidated.

In all other respects, his mode of life was a copy of the regularity and precision of his experiments: it could not even be altered by an incident which would, to a certainty, have materially changed the conduct of almost any other human being.

Being the son of a younger branch of the family, he was in confined circumstances during his youth; and it is said, that his parents treated him like a man who was not likely ever to become rich. Chance, however, or real merit, decided otherwise. One of his uncles, who had commanded in India, and amassed there a very great fortune, conceived a particular affection for him, and left him all he possessed. Mr. Cavendish therefore became suddenly opulent; but to get rid of his fortune cost him only a few more signs, as he thus pointed out what might be done with the excess of his income! And even to obtain these instructions, his banker was obliged to press him several times. One day, he had an opportunity to apprise him, that he had suffered his money to accumulate in his (the banker's) hands, till it amounted to ninety-thousand pounds sterling! and that the firm could not, for shame, continue the care of so enormous a sum, upon their mere personal security; a declaration which certainly showed as much delicacy on the one side, as carelessness on the other. Nevertheless, the bankers were only answered by signs upon signs, and funds upon funds, till at length Mr. Cavendish left in their hands no less a sum than one million and a half sterling! Few, if any, learned men have been so rich; and few rich men have become so, like him, without caring for their good fortune. The cause, however, of the greatness of his fortune is also the excuse for it; as we must admit, that some excuse is necessary for possessing so much wealth. Mr. Cavendish, nevertheless, often sought for the means of diminishing his own. He supported and put forward in life several young men who gave indications of talents; he formed a grand library, and a most valuable cabinet of philosophical instruments; and he devoted them so completely to the public, that he did not even reserve to himself the privilege of borrowing his own books, except under the same formalities as others, inscribing his name, like them, in the registers of the librarian. On one occasion, the keeper of his instruments came, in alarm, to tell him, that a young man had broken a very valuable machine. His answer was, "It is necessary that young men should break machines, that they may learn how to make use of them. Get another in its place!"

The regular life of Mr. Cavendish,

obtained for him a length of days and an exemption from infirmities. Till the age of seventy-nine, he preserved his bodily activity and powers of mind. He was probably indebted to the reserve of his manners, and the modest tone of his most important writings, for another advantage not less signal, and one which men of genius so seldom enjoy,—his tranquillity was not disturbed by the jealousy of criticism. Like his great countryman, Newton, with whom he may, in many respects, be compared, he died full of years and glory; esteemed by his competitors, respected by the generation which he had enlightened, and celebrated among all the learned men of Europe. In short, he afforded to the world an accomplished model of what all learned men ought to be, and a striking example of the happiness which ought to be general among them. He died at Clapham Common, near London, on the 10th of February, 1811.

DETACHED ANECDOTES.

PERVERSE RESISTANCE.

SO obstinate in error were our countrymen in former times, and so wedded to their ancient practices, that in the articles of peace made between the Marquis of Ormond on behalf of Charles I., and the Irish, in 1648, the 22d Article is as follows:

"*Item*, It is concluded, accorded, and agreed upon, and his Majesty is graciously pleased, that two Acts lately passed in this kingdom, one prohibiting the ploughing with horses by the tail, and the other prohibiting the burning of oats in the straw, be repealed."

CHURNING.

"In some parts of Old Castile," says Townsend, in his travels, "it is curious to see the women churning as they walk along, or stand chatting with a neighbour, each with a leather bag, in which they shake the cream, till the butter is completely formed."

AN EXAMPLE TO MODERN METHODISTS.

The Rev. John Wesley, himself, has asserted in his writings, not only that an anti-trinitarian may manifest a desire of escaping future misery, but that he may be a truly good man. In one of the numbers of the Armenian Magazine, published a few years before his death, he inserted an extract of the memoir of the life of that eminent Unitarian, Thomas Firmin. In introducing this extract, he observed, that "he had formerly been inclined to think, that a person who was unsound with respect to the doctrine of the Trinity, could not be a converted or good man. But that now he thought differently, since the subject of the memoir was undoubtedly a pious man, though erroneous in the doctrine of the Trinity, and *that there was no arguing against facts.*"

[*The Monthly Repository of Theology and General Literature.*]

SINGULAR PARTNERS IN SPANISH INSURANCE COMPANIES.

The confidence of Catalans on the intercession of the Saints, has at all periods been a source of consolation to them, but, upon some occasions, has betrayed them into mischief. Every company of artisans, and every ship which sails, is under the